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Dated: August 5, 2009

Electronic Signature for Kevin M. Kocun: /Kevin M. Kocun/

Docket No.: SPINE 3.0-2153 CIP DIV  
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:  
Yuan et al.

Application No.: 10/091,708

Filed: March 6, 2002

For: DEVICE FOR SECURING SPINAL RODS

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: Group Art Unit: 3733  
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: Examiner: D. C.  
Comstock  
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Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**RESPONSE**

Dear Sir:

The present Communication is in response to the Official Action mailed May 14, 2009 ("the Action"). Applicants believe the currently pending claims to be allowable over the cited prior art, and therefore, no amendments of such claims have been submitted. The following sets forth Applicants' positions regarding the currently pending claims and said art.

As an initial matter, Applicants respectfully thank the Examiner for taking the time on July 24, 2009 to discuss the present matter with the undersigned ("the Interview"). Such discussion is evidenced by the Examiner's Interview Summary dated July 28, 2009 ("the Summary"). During the Interview, the undersigned pointed out Applicants' positions regarding the allowabilty of the currently pending claims, and in particular, Applicants' positions regarding why such claims were neither

anticipated nor obviated as is asserted in the Action. At the conclusion of the interview, the Examiner indicated that he understood Applicants' positions, but nonetheless requested that Applicants submit the present written response to more formally outline such arguments. This is confirmed by the Summary

Turning now to the prior art rejections set forth in the Action, the Examiner first rejected claims 81, 83, 85-89, 91, and 95-97 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,110,172 to Jackson ("Jackson"). Further in the Action, the Examiner also rejected claims 71-79, 82, 92-94, and 98-100 under 35 U.S.C. § 103(a) as being unpatentable over Jackson in view of U.S. Patent No. 5,360,431 to Puno et al. ("Puno"). Still further, the Examiner noted claims 80, 90 and 101-106 as being objected to as being dependent upon a rejected base claim, but allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. While Applicants respectfully thank the Examiner for indicating these latter claims as including allowable subject matter, they believe that broader claim coverage in this matter is warranted.

As was explained to the Examiner during the interview, the present invention significantly differs from that of Jackson, which has been utilized as both an anticipatory reference and the primary reference in an obviousness combination. Both references teach pedicle screws, but Jackson's is very different structurally from the present invention. Bone screw assembly 1 of Jackson includes a bone screw 2, a cap 3 and a set screw 4. As is clearly shown in the drawings of Jackson, cap 3 is meant to be inserted laterally (in other words, along a straight line) into a head of bone screw 2. Thereafter, set screw 4 is threaded within cap 3 and into contact with a spinal rod disposed in the bone screw head to lock the system in place.

On the contrary, the present invention, as claimed, requires a screw having a head portion for receiving a spinal rod and a locking cap including a first or upper portion engagable with an interior surface of the head portion of the screw and a lower or second portion having an elongate recess for engaging an exterior surface of a spinal rod received by the head portion to secure the position of the head portion relative to the spinal rod upon rotation of the first or upper portion. Moreover, the first or upper portion and second or lower portion are coupled together such that they are capable of rotational movement with respect to each other. While independent claims 71 and 81 differ slightly in the specific language utilized to describe the present invention, the aforementioned limitations are common between those independent claims.

In rejecting independent claims 71 and 81, the Examiner asserted Jackson to meet all of the above discussed limitations. For instance, with respect to independent claim 81, the Examiner asserted that Jackson discloses a two-part locking cap including an upper/first portion (the Examiner pointed to FIG. 4) having opposed arcuate engagement flanges (the Examiner pointed to elements 40 and 41 of Jackson) and a lower portion/second portion (the Examiner pointed to FIG. 4) having an elongated recess (the Examiner pointed to element 68) for engaging an exterior surface of a spinal rod. Moreover, the Examiner asserted that the upper portion and the lower portion of the locking cap are mechanically coupled together by threads formed on what the Examiner believes to constitute an arcuate axial post (*i.e.*, element 4 of Jackson) so that the upper portion of the locking cap is capable of being rotated relative to the second or lower portion of the locking cap. Applicants respectfully disagree with these assertions. Namely, as was pointed out to the Examiner during the interview, even if the Examiner were to consider elements 40 and 41 of Jackson as

constituting flanges, and element 68 as meeting the elongated recess limitation, those elements are located on the same portion, *i.e.*, element 3. Independent claim 81 requires that those two elements be located on two different portions that are rotatable with respect to one another. In other words, by virtue of claim 81 requiring that the flanges be located on a first portion and the recess be located on a second portion rotatable with respect to the first portion, such claim may only be anticipated by a reference showing flanges that are rotatable with respect to an elongate recess. This is clearly not the case in the Jackson reference.

Independent claim 71 includes similar limitations, and the Examiner rejected that claim as being obvious in view of the combination of Jackson and Puno. The citation to Puno was only to teach angular movement between a fastener portion and a head portion. Thus, the Examiner cited Jackson as meeting the other limitations of independent claim 71. Again, Jackson does not teach an upper portion engagable with an interior surface of the head portion and a lower portion having an elongated recess for engaging an exterior surface of the spinal rod, where the upper portion and the lower portion of the locking cap are coupled together by an axial post that facilitates relative rotational movement of the upper portion relative to the lower portion. While the Examiner again pointed to element 4 in Jackson as meeting the axial post limitation, Applicants respectfully point out that this does not result in an upper portion engagable with an interior surface of the head portion and the lower portion having elongated recess where those elements are rotatable with respect to one another, which is required by claim 71.

Therefore, in light of the foregoing, Applicants respectfully submit that currently pending independent claims 71 and 81 are neither anticipated nor obviated by Jackson, Puno, or the combination thereof. Likewise, because the remaining claims

properly depend from one of independent claims 71 or 81, or an intervening claim, Applicants also respectfully submit that such claims are not anticipated or obviated by the cited prior art. Moreover, the dependent claims may in and of themselves include subject matter even more clearly not met by the prior art, something acknowledged by the Examiner's indication of the allowability of certain of such claims. Applicants reserve the right to argue any of this subject matter at a later date, if necessary. As such, Applicants respectfully request allowance of each and every one of the currently pending claims. Given the lengthy prosecution of the present matter, speedy indication of the allowance of such claims is respectfully requested.

As it is believed that all of the rejections set forth in the Official Action have been fully met, favorable reconsideration and allowance are earnestly solicited. If, however, for any reason the Examiner does not believe that such action can be taken at this time, it is respectfully requested that he telephone Applicants' attorney at (908) 654-5000 in order to overcome any additional objections which he might have.

If there are any additional charges in connection with this requested amendment, the Examiner is authorized to charge Deposit Account No. 12-1095 therefor.

Dated: August 5, 2009

Respectfully submitted,  
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